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DEBT SERVICING AND ECONOMIC GROWTH IN NIGERIA

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K E Y W O R D S

Debt servicing, Domestic debt, Foreign debt, Economic growth, Gross domestic product.

A B S T R A C T

Rising level of public debt and surged debt servicing obligations have become major problems for economic stability and growth in Nigeria. A large proportion of revenue by governments is often spent on debt repayment and there is concern as to the effect of debt servicing on growth. This study investigated the relationship between debt servicing and economic growth in Nigeria where the proxies for debt servicing were domestic debt servicing (DDS) and foreign debt servicing (FDS), while the indicator of economic growth was the gross domestic product (GDP). The research was based on the debt overhang theory, Keynesian theory of public debt, and the Solow growth theory. The research design used in this study is ex-post facto research design and the philosophy of research used is positivism. Secondary time series data spanning the time-period 1986 to 2024 were obtained from the Central Bank of Nigeria Statistical Bulletin and World Bank Developments Indicators. The population of the study were Nigeria's macroeconomic data in the study period and the sample size were 39 annual data selected with the help of census sampling technique. Data were analysed by adopting methods of descriptive statistics, Augmented Dickey-Fuller Unit Root Test, cointegration test of Johansen and ECMs were parsimonious error correction model (ECM) at 5% level of significance. The results showed that domestic debt servicing is negatively and significantly impacting GDP, whereas the foreign debt servicing has a positive and significant impact on economic growth in Nigeria. The study therefore concludes that excessive domestic debt servicing is growth inhibiting whereas productive use of foreign borrowing may be growth fostering. The study recommends prudent debt management at the domestic level, productive use of external debt and enhanced fiscal transparency. The research contributes to the knowledge by highlighting the empirical evidence regarding differential impacts of domestic and foreign debt servicing on economic growth in Nigeria.

Introduction

Public debt has continued to be a key tool of fiscal policy in developing economies, particularly where the government revenue is insufficient to meet development needs. In

the case of Nigeria, the persistent budget deficits, weak mobilisation of revenue, lack of infrastructure and macroeconomic instability have brought the country to the point of higher dependence on borrowings from both domestic and external sources. Although borrowing may aid capital formation and economic growth when productively used, it also entails debt servicing obligations that can undermine economic growth when the repayment obligations take a large proportion of public revenue. This makes the relation between debt servicing and economic growth an important issue in the discourse of macroeconomic and development in Nigeria (Oyadeyi et al., 2024; Amu et al., 2025).

Debt servicing is the banking of interest and principal on borrowed funds on a periodical basis. In this research, the measure of debt servicing is domestic debt servicing and foreign debt servicing whereas the measure of economic growth is gross domestic product (GDP). Domestic debt servicing is incurred from obligations on government securities and other debts raised in the Nigerian financial system while foreign debt servicing is incurred from the repayment of obligations owed to bilateral, multilateral and commercial external creditors. These two dimensions in debt servicing have different implications for the economy. Domestic debt servicing may help deepen the local financial market, but it appears that excessive reliance on domestic debt servicing may crowd out private investment because of higher interest rates. Foreign Debt servicing on the other hand, exert pressure on foreign exchange earnings and can lead to worsening of fiscal stress where export receipts are low (Opara et al., 2021; Yusuf & Mohd, 2023).

In Nigeria, expansion in the size of public debt and the increasing proportion of revenue spent on debt servicing has given cause for serious concern with respect to fiscal sustainability. Oyadeyi et al (2024) observed that debt below certain thresholds may be supportive of growth and also that debt beyond such threshold have a negative effect on economic growth. Similarly, Amu, et al (2025) maintained that debt service obligation may limit public investment and diminish the resources available for productive sectors of the economy. Ehikioya and Omankhanlen (2021) also reported public debt significantly affected economic growth of Nigeria while Eze et al. (2023) demonstrated public debt negative impact on economic growth in their study period. These results indicate that debt servicing can make GDP productive or nonproductive based on the nature, size and structure of the debt portfolio.

Existing studies on debt and growth in Nigeria have not sufficiently solved one specific problem - debt servicing composition. Many empirical works have focused on total public debt, external debt stock or domestic debt stock and not adequately isolated the individual effects of domestic debt servicing and foreign debt servicing on GDP. For example, in the work by Ehikioya and Omankhanlen (2021), the authors were focused on the impact of public debt and growth in general, while Yusuf and Mohd (2023) focused on the nonlinear effects of public debt rather than breaking down servicing obligations into domestic and foreign components. Opara et al. (2021) paid attention to domestic public debt but not to a combined framework of domestic and foreign debt servicing as joint explanatory variables of growth. There is also inconsistency of empirical findings. Oyadeyi et al. (2024) reported threshold effects, Amu et al. (2025) stressed the debt service constraining effect on development while Eze et al. (2023) have reported a negative effect of public debt on growth. These mixed results suggest that a conclusive relationship between debt growth and Nigeria is yet to be ascertained. Therefore, there is a noticeable literature gap in a study that specifically examines domestic debt servicing and foreign debt

servicing as separate measures of debt burden and have a direct relation with GDP in Nigeria.

Literature Review

Conceptual framework

Debt Servicing

Debt servicing can be described as the periodical payment of interest along with principal on previously contracted loans by a government or an organisation. In the context of financial transactions of a public finance, debt servicing refers to the financial obligations incurred by a government in liquidating the repayment obligations on domestic and external borrowings. Governments frequently turn to borrowing to pay for budget deficits, the building of infrastructure and other government spending. However, such borrowing creates future repayment obligations which are collectively known as debt servicing (Omodero & Alpheaus, 2019). Debt servicing therefore is an important element of fiscal management, especially in the developing countries where there may be insufficient government revenues to meet developmental requirements. Debt servicing typically comprises of two significant components namely, interest payments and principal repayments. Interest payments are one thing - the interest represents the cost of borrowing money and principal repayment refers to the settlement of the amount of money originally borrowed. According to Eze, Nweke, and Atuma (2023), the debt servicing obligations can affect the macroeconomic stability because much of the government revenue could be spent on servicing debt instead of financing productive investments. When expenditure on debt servicing becomes excessive, it may result in crowding out other expenditures such as infrastructure, education and healthcare expenditure and also lead to a slowdown in economic development.

In Nigeria debt servicing is usually divided into domestic debt servicing and foreign debt servicing. Domestic debt servicing refers to the repayment commitment on domestic loans acquired in the country through such instruments as treasury bills, bonds, and other security instruments. Foreign debt servicing on the other hand is related to the payment of loans which are acquired from external creditors such as multilateral institutions, bilateral lenders and international capital markets (Ehikioya & Omankhanlen, 2021). While the borrowing practise can lead to economic growth if used correctly, the debt servicing charges can create fiscal pressure and a limit to government's ability to finance development projects. Consequently, good strategies for debt management are needed so that borrowing forms part of economic growth, but does not add to an unsustainable debt burden. Proper monitoring of debt servicing obligations is therefore critical to ensure the sustainability of the fiscal situation as well as to foster long-term stability of the economy.

Economic Growth

Economic growth is the sustained increase in the production of goods and services in an economy within a given period of time. It is usually measured in terms of gross domestic product (GDP) or real GDP, which is the sum of the value of all the goods and services produced in a country's borders. Economic growth is a key economic indicator because it measures the improvement in productivity, income levels, and the overall economic well being of the economy. According to Todaro and Smith (2020), economic growth is the growth in an economy's productive capacity, which allows for a higher

standard of living as well as the enhancement of the population's welfare. Economic growth is caused by a number of factors such as accumulation of capital, technological improvement, human capital development and efficient allocation of resources. Governments play a very important role in aiding growth by having the policies that promote investing, infrastructural development, and macroeconomic stability. When economic growth is sustainable it results in more employment opportunities, higher income levels and better living standards. However, there may be a hindrance of growth due to macroeconomic instability, poor governance, and high obligations of public debt (Mankiw, 2019).

In terms of developing economies like Nigeria, economic growth is usually affected by fiscal policies, performance of the external sector and the flow of investment. There are situations when public borrowing may be beneficial in supporting growth as long as the borrowed funds are invested in productive areas of the economy such as infrastructure, manufacturing and education sectors. However, too much debt and sizable debt servicing payments may affect the amount of funds available for constructive public spending and reduce the rate of economic growth (Ehikioya & Omankhanlen, 2021). Economic growth is then not only about improving output but also about the improvement of the structural capacity of the economy to sustain long-term growth. Policymakers commonly target policies to promote sustainable economic growth by promoting investment, bettering the quality of institutions and ensuring macroeconomic stability. As a result, it is important to understand the determinants of economic growth, including fiscal variables such as debt servicing, in order to make policies that promote sustainable economic development.

Theoretical Framework

Debt Overhang Theory

Debt Overhang Theory is among the biggest theoretical frameworks used to explain the relationship between the public debt obligations and growth of the economy. The theory was made famous by Krugman (1988), and later generalised by Sachs (1989) to demonstrate how too much debt can be detrimental to investment and growth. The core idea of the theory is that when a country piles up a massive debt load, investors may expect future returns from investment to be used to service old debt and not benefit investors. As a result, investment incentives are reduced and economic growth is reduced. According to Krugman (1988), a country that is experiencing debt overhang is described as one where the expected obligations of future debt servicing are so large that they discourage domestic and foreign investment. Investors believe that any additional output generated from investment is likely to be subject to heavy taxation by government to meet the obligations on government debt repayment. This expectation puts the private sector off from productive activities and has a demotivational effect on overall economic growth.

Sachs (1989) has further reasoned that debt overhang may cause a disincentive for governments to carry out economic reforms as the benefits of such reforms may largely accrue to the external creditors in terms of increases in debt servicing payments. Consequently, countries with high debt burdens may have slow economic growth, low levels of investment and low levels of fiscal flexibility. In the case of Nigeria, the level of public debt and its proportion of government revenue earmarked for debt servicing has been the cause of concern about the potential debt overhang. When a high percentage of government revenue is spent paying interest on debts, there is less left to invest in public

infrastructure, education and other growth-enhancing sectors. This may constrain the ability of the economy to scale up productive activities and continue to grow the economy over the long haul.

Keynesian Theory of Public Debt

The Keynesian theory on public debt offers an alternative view to the government debt/economic growth relationship. The theory has its roots in the works of John Maynard Keynes, (1936), who believed that government borrowings can be used as a policy instrument to stimulate economic activity in times of economic downturns. According to Keynesian economics, the government can borrow funds to boost aggregate demand through public expenditure on infrastructure, social services and other development projects. When government spending increases it stimulates economic activities due to the multiplier effect and hence more output, employment, and incomes are generated. In this context, public debt is not necessarily a bad thing if borrowed funds are used for activities that yield higher returns to promote economic growth.

Keynesian theorists also maintain that the effect of public debt depends very much on the way borrowed funds are used. If borrowed resources are used for infrastructure development, technological development and human capital formation, they could increase productivity and grow the economy. However, if the borrowed funds are mismanaged or used for unproductive expenditure, the debt servicing obligations would impose a burden on the future generations and could hamper their economic performance. In developing countries like Nigeria, government borrowing is usually justified as a way of getting around infrastructure deficits and furthering economic development. When the debt servicing obligations are still manageable, the benefits from the increased public investment may outweigh the costs resulting from debt repaying. However, too much spending on debt repayment can lead to a decrease in government spending, which can reduce government spending on development projects, and therefore reduce the benefits of growth from taking on debt.

Solow Growth Theory

The Solow growth theory, developed by Robert Solow (1956) is another theoretical foundation for understanding economic growth and role of capital accumulation. The theory focuses on the fact that economic growth is influenced by the accumulation of physical capital, growth of labour and technology. According to Solow, increases in capital investment raise the productivity of an economy and raise the output capability of a country. Within this framework the government can bring economic growth by providing financial resources needed for capital formation by undertaken borrowings. When borrowed funds are used for infrastructure, education and technological development, they are used to accumulate productive capital and boost economic growth.

However, the Solow model also emphasizes the significance of efficient resource allocation and sustainable investment. Excessive debt servicing obligations may take away the resources that are necessary for capital accumulation and investment. Where governments spend too much of the revenue on debt servicing instead of investing in productive activities, the level of capital formation falls and the rate of economic growth slows. In the case of Nigeria, the increased debt servicing burden can mean that there will be less money to invest in infrastructure and other expenditures that promote growth. This may restrict the capacity of the economy to implement a sustained growth as predicted by

Solow model. Therefore, pre-empting without harming debts, generating necessary investment borrowing while ensuring to keep a cheque on servicing debts remains crucial for stimulating long-term economic growth.

Empirical Review

Amu, Kanu, Akuwudike and Okere (2025) examined the relationship between public debts and the economic development in Nigeria using an ex-post facto design and variety of econometric tools. Their study evaluated the impact of public debt on economic growth rate, aggregate demand and sectoral composition and threshold relations. Later summaries of the article continue by saying that external debt can be growth supporting under some circumstances, but debt service payments have a negative effect upon growth. This work is extremely relevant in terms of its broader and modern perspective of understanding the debt growth nexus in Nigeria and possible existence of threshold effects, where debt could begin to change from being supportive in nature to being harmful. The inclusion of this strengthens the empirical base of looking at both debt servicing variables in relation to GDP.

Ndu (2024) researched the debt servicing payment as bane of economic growth in Nigeria between the period of 2005 to 2021. Using the multiple regression approach, the study found that debt payments to creditors of Nigeria had a significant effect on GDP. The thrust of the argument is the fact that Nigeria's growth challenge is not merely a borrowing problem but one of the recurring pressure created by the burden of repaying in the form of borrowing domestic and foreign. Ndu's study is particularly useful for present research because it directly focuses on debt servicing payment and not on total debt stock and therefore, it is particularly close to the variables of domestic and foreign debt servicing used in the current study.

Kolawole, Seyingbo Adejare Olofinlade and Haliru (2024) public debt, public debt servicing and economic growth in Nigeria by using secondary data from 1992 to 2023 and Average Error Correction model. Their findings indicated a significant but negative association between domestic debt and economic growth in the long-run, which indicates that sustained borrowing and its attendant burden of servicing it may adversely impact on output performance over time. The study is significant as it is one of the more recent works produced in Nigeria to add to the literature and reflect the current situation of debt in the country. It also helps reinforce the case made in policy terms that rising public debt becomes an issue when this means that servicing these obligations takes up resources which would otherwise fund the infrastructure or the productive sectors of the economy.

Aladejare (2024) investigated the effects of external debt servicing and sustainability in Nigerian economy having employed data from 1980-2022 from World Bank development indicators. The study was motivated by the fact that increasing payments on external debt have resulted in the creation of fiscal imbalances and budgetary constraints which may militate against growth. Its main contribution is the combination of the treatment of external debt servicing and debt sustainability, which is helpful in understanding not only whether debt hurts growth, but whether the repayment profile of the country is manageable over time. For the present study, the work of Aladejare is useful to the extent that it links repayment pressure directly with macroeconomic fragility and reinforces the argument that debt sustainability conditions the growth effect of debt servicing.

Yusuf and Mohd (2023) utilised the Nonlinear Autoregressive Distributed Lag (NARDL) technique in analysing the nonlinear impact of public debt on economic growth in Nigeria. Their study found that the external debt had a significant positive impact on growth, but negatively impacted on economic growth because of the debt service payments. They therefore suggested necessary fiscal reforms to reduce the financing of the deficit, strengthen domestic mobilisation of revenues and achieve better governance. The contribution of this study is the realisation that the effects of debt and growth are asymmetric and nonlinear. In other words, the debt may be expansionary under certain circumstances, although the payments on the debt service may remain contractionary. This makes the study very useful in order to understand why borrowing and repayment may have different implications on GDP in Nigeria.

Eze and Ukwueni (2023) examined the effect of public debt stock rates on economic growth in Nigeria and as summarised in later ARDL based literature, found negative effect of external debt and domestic debt on GDP, with the former turning out statistically weak in some specifications. Their study highlights the implications of the build-up of such persistent debt for recovery, since it is argued that an increase in public debt can become counterproductive if it does not lead to the productive accumulation of capital. The study is relevant as it gives credence to the debt overhang position that future repayment expectations may discourage investment and growth. For a study on debt servicing, one major value will be providing a linkage between the stock of debt accumulation and the eventual servicing strain that will constrain fiscal space and economic recovery.

Idris and Aliyara (2022) investigated the effect of debt burden on economic growth in Nigeria using approximately 30 years of data over the period 1990-2020 estimated the relationship with the third method using the method of techniquescalled ordinary least squares. Based on their study, as expressed in the empirical discussions that follow, the authors of the report drew the following conclusions: Rising debt burden curbs growth and, hence, the acquisition of foreign debt should be guided strictly by economic considerations. The core implication of their work is that borrowing will be problematic when the productive and foreign exchange capacity of the economy is too weak to accommodate future repayment obligations. This makes their study relevant to the analysis of debt servicing because it makes the pressure of debt servicing into a direct channel through which the debt burden can suppress growth.

Akanbi, Uwaleke and Ibrahim (2022) particularly looked at the issue of external debt service and economic growth in Nigeria using annual data of Nigeria from 1981 to 2020. Employing the ARDL model, they determined evidence of cointegration, and reported negative relationship between external debt service and economic growth but not statistically significant. They took this to indicate a resource depletion effect, that is, that the foreign currency obligations linked to the payments of debt may absorb funds that could be used for productive investment and expansion. Their study is highly relevant because it focuses on isolating the external debt service from the broader measures of debt, and also demonstrates that even where the level of statistical significance is low, the growth-reducing effect is still evident.

Otiko and Iheonkhan (2022) analysed the Automobile industry in Nigeria: Debt servicing and economic growth with corruption as moderating variable based on the data from 1990 to 2020 using the multiple regression technique. Their results showed the foreign debt servicing had significant effect on GDP, but not for domestic debt servicing.

They did also find that corruption had a negative indirect impact on the relationship between debt servicing and growth. This is an especially useful paper as it goes beyond direct associations between debt growth and shows how institutional weakness can make the macroeconomic impact of debt repayment worse. The implication in the Nigerian condition is therefore that because of poor governance, even well-structured debt can lose its developmental value if allocation and re-pay efficiency are affected.

Ehikioya and Omankhanlen (2021) investigated the effect of public debt on economic growth in Nigeria analysing annual series from 1981 to 2019. Their research used cointegration test of Johansen, ordinary least squares, and VEC modelling to assess how the dynamics of the public debt relate to the performance of output. The research were observed to cause adverse impacts of the domestic and external debts on the GDP with the external component being more damaging. Their evidence suggests that where public borrowing is not effectively channelled into effective investment, it can impede growth through fiscal pressure, lower efficiency of investment and increasing burden of repaying debt. This study is important as it strengthens the argument that the quality of the debt utilisation matters as much as the size of the debt itself in explaining the outcomes of growth in Nigeria.

Opara, Nzotta and Kanu (2021) explored the domestic public debts of Nigeria and the economic development of the country spanning the period 1981 to 2018. Using ARDL framework after unit root testing, they found that domestic debt had a positive and significant effect on GDP per capita both in the short run and the long run. By contrast, external debt was negative and significant in the short run but positive and insignificant in the long run, whereas total debt service payments was positive but insignificant in the short run and negative and significant in the long run. This empirical review is of particular significance to the present study as it directly indicates that the servicing burden, rather than just borrowing, may turn into a drag on development when the burden of repaying the debts becomes higher over time.

Methodology

This study has the ex-post facto study design. The ex-post facto design is suitable for studies that involve examining relationships among the variables with historical data and without the manipulation of the variables of interest. In macroeconomic and financial research, to study the cause-and-effect relationship between economic variables researchers use the data that already exists. According to Gujarati and Porter (2009), ex post facto design is appropriate for econometric analysis because variables of interest have already taken place and the researcher cannot control or manipulate them. Similarly, according to Kothari and Garg (2019), ex-post facto research is widely used in research in economics where the researcher analyses the events that have taken place in the past to determine the effect of independent variables on dependent variables. In the light of the above study, the design permits the researcher to investigate the impact of domestic debts servicing and foreign debt servicing on economic growth in Nigeria using the historical macroeconomic data from 1986 to 2024.

The study is premised on a positivist research philosophy. Positivism focuses on the use of objective measurement, empirical observation, and statistical analysis in the explanation of the relationship of variables. According to Saunders, Lewis, and Thornhill (2019), positivism is based on the assumption that social and economic phenomena can be

studied using similar methods as those used in the natural sciences, in which hypotheses are tested using quantitative data. The positivist approach is therefore appropriate in this study because it makes use of laid down, measurable economic indicators such as debt servicing and gross domestic product. By using the positivist philosophy, econometric techniques are used in the study to objectively assess the changes between the dependent variables and the independent variables on debt servicing and economic growth in Nigeria.

The research is based on secondary time series data downloaded from reliable and publicly available sources. In particular, information was obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin, and the World Bank World Development Indicators. These sources contain detailed macro-economic information on the public debt and economic profile of Nigeria. The data set spans from 1986-2024, which is sufficient to capture long-run trends and structural changes in the Nigerian debt profile as well as economic growth in the country. Secondary data are useful for macroeconomic research because they guarantee their reliability, consistency and comparability over time (Wooldridge, 2020). The variables being used are domestic debt servicing, foreign debt servicing and gross domestic product (GDP).

The study uses a number of econometrics techniques to analyse the data. First, descriptive statistics are used to gather the attributes of the variables such as its mean, standard deviation, minimum and maximum value. Descriptive analysis is useful in getting a preliminary understanding about the distribution and behaviour of the variables. Second, the unit root test is carried out using the Augmented Dickey-Fuller (ADF) to determine stationarity of the time series data. The reason why stationarity is important in time series analysis is that non stationary data may yield spurious results in regression (Gujarati & Porter, 2009; Sunday et al., 2019; Olulu-Briggs & Sunday, 2021). Third, the Johansen co-integration test is used to assess whether or not there is long-run equilibrium link between debt servicing variables and economic growth. According to Johansen (1991), the scope of co-integration analysis is helping the identification of long-run relationships between integrated variables. Finally, the parsimonious error correction model (ECM) is estimated that captures the short-run dynamics as well as the long-run adjustments among the variables. The ECM is used to describe the correction of short-term deviations from long run equilibrium over the period of time, which helps to have a complete picture of the relationship between debt servicing and economic growth in Nigeria.

Results and Discussion

Results and Analysis

Table 4.1: Descriptive Statistics Results

	GDP	DDS	FDS
Mean	50660.65	10409.59	3889.152
Median	18124.06	1370.325	896.8496
Maximum	234425.9	236449.9	38219.85
Minimum	187.8306	27.94910	17.30060
Std. Dev.	63943.52	37617.02	7125.094
Skewness	1.287681	5.774281	3.348367
Kurtosis	3.687007	35.21638	15.38082
Jarque-Bera	11.54475	1903.305	321.9628
Probability	0.003112	0.000000	0.000000

Source: E-views 10 Output

The result demonstrates that the mean value of GDP is 50,660.65, which indicates the average value of economic production during the period of the study. The median figure value of 18124.06 indicates that the GDP distribution is uneven, with several values being extremely high, since well above the mean value. The maximum value of GDP of 234,425.9 and the minimum value of 187.8306 shows a wide variance in the economic performance in years under review. The fairly high standard deviation of 63,943.52 shows high levels of volatility in plano view of Nigeria's economic growth in the period.

For domestic debt servicing (DDS) the mean value of the 10,409.59 stands for the averageDeg for domestic debt servicing and corroborates the level of domestic debt servicing obligations undertaken by the government. The median value of 1,370.325 is substantially less than the mean value suggesting the presence of extreme values in the series that. This is confirmed by the maximum value of 236,449.9, which is very high compared to the 27.94910 minimum value, so there are large fluctuations in domestic debt servicing during the study period. This is further corroborated by the high variability of our domestic debt servicing obligations in Nigeria as reflected in the standard deviation of 37,617.02. Similarly, foreign debt servicing (FDS) had a mean value of 3,889.152 and a median value of 896.8496, indicating that the distribution is skewed positively because of the presence of some unusually high values. The maximum and minimum values of 38,219.85 and 17.30060 respectively also show a great variability in the foreign debt repayment obligations that Nigeria has.

The skewness values of 1.287681 for GDP, 5.774281 for DDS and 3.348367 for FDS suggest that all the variables are positively skewed, which implies that the distributions have long right tails. Furthermore, the kurtosis numbers of 3.687007, 35.21638 and 15.38082 respectively suggest leptokurtic distributions, which indicate that the variables have a heavier tail and sharper peak compared to the normal distribution. The Jarque-Bera statistics and its corresponding probabilities indicate that all the variables have a probability less than 0.05, etc. and hence, the variables are not normally distributed. Overall, from the descriptive statistics the variance and asymmetry in the GDP, domestic debt servicing and foreign debt servicing in Nigeria is quite considerable in the period of study.

Result of Unit Root Test

Variables	T-Stat @ Level	T-Critical @ level	P-value @ level	T-Stat @ 1st Diff.	T-Critical @ 1st Diff.	P-value @ 1st Diff.	Order of Integration
GDP	0.197658	-2.957110	0.9619	-3.768033	-2.957110	0.0161	I(1)
DDS	-0.887232	-2.963972	0.8112	-6.462213	-2.963972	0.0000	I(1)
FDS	-1.9831646	-2.971853	0.0921	-8.080323	-2.971853	0.0000	I(1)

Source: E-views 10 Output

The results show that the variables GDP, DDS and FDS are not stationary at level because the calculated t-statistics are less than the value of the t-statistics and the p-value is greater than 0.05. Specifically, GDP t-statistic was 0.197658 at level level and the probability value was 0.9619, suggesting the presence of a unit root. Similarly, DDS and FDS also recorded non-stationary results at level with the probability value of 0.8112 and 0.0921 respectively. However, after taking the first difference, it can be observed that the variables become stationary, by the results shown. GDP tested with a t statistic of -3.768033 and probability value of 0.0161 which was less than 0.05 so report first difference is stationary. Likewise, DDS and FDS had t-statistics of -6.462213 and -8.080323 respectively with probability values of 0.0000 and this confirmed the stationarity at first difference. This

means that the variables are of the type which implies that they are integrated of order one, denoted as I(1). Based on the fact that all the variables are integrated at the same order, it is appropriate to cheque for the possibility of long-run relationships between the variables via the Johansen co-integration technique.

Table 4.3: Result of Johansen Co-integration

Series: GDP DDS FDS
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.456574	37.90338	29.79707	0.0047
At most 1	0.245434	15.33847	15.49471	0.0528
At most 2	0.224483	14.918795	3.841466	0.1266

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.456574	22.56491	21.13162	0.0312
At most 1	0.245434	10.41968	14.26460	0.1858
At most 2	0.224483	14.918795	3.841466	0.1266

Source: E-views 10 Output

The trace statistic shows that we reject the null hypothesis of no co-integration as the trace statistic value of 37.90338 is higher than the critical value of 29.79707 level 5% probability with value of 0.0047. This means that there is at least one co-integration equation between the variables. However, the hypothesis of at most one co-integrating equations cannot be rejected because the value of the trace statistic 15.33847 is slightly smaller than the critical value 15.49471. Similarly, maximum eigenvalue test supports the existence of one co-integrating equation. For all, the maximum eigenvalue statistic 22.56491 is from the set above greater than the critical value 21.13162 with the corresponding probability value 0.0312 leading us to the rejection of the null hypothesis of no co-integration. This result verifies the existence of a long run equilibrium relationship between GDP, domestic debt servicing and foreign debt servicing suggesting that the changes in debt servicing obligations and a long run movement in economic growth in Nigeria are associated.

Table 4.4: Parsimonious ECM Result

Dependent Variable: GDP
Method: Least Squares
Date: 03/08/26 Time: 05:36
Sample (adjusted): 1987 2024
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DDS(-1))	-0.652984	0.082440	-7.920741	0.0000

D(FDS(-1))	9.593791	0.438583	21.87453	0.0000
ECM(-1)	0.976735	0.046203	21.14014	0.0000
C	20173.30	1890.200	10.67257	0.0000

R-squared	0.979675	Mean dependent var	51988.88
Adjusted R-squared	0.977882	S.D. dependent var	64254.32
S.E. of regression	9555.977	Akaike info criterion	21.26702
Sum squared resid	3.10E+09	Schwarz criterion	21.43940
Log likelihood	-400.0734	Hannan-Quinn criter.	21.32835
F-statistic	546.2823	Durbin-Watson stat	1.687886
Prob(F-statistic)	0.000000		

Source: E-views 10 Output

The coefficient of D(DDS(-1)) is -0.652984 and is statistically significant with probability value = 0.0000. This implies that the service of domestic debt has negative and significant negative impacts on GDP in the short-run. In other words, rises in economic growth in domestic debt servicing obligations are at the expense of economic growth, perhaps due to the diversion of government resources from productive investments to debt repayment. On the other hand, the coefficient of D(FDS(-1)) is 9.593791 and is statistically significant with a probability value of 0.0000 implying the positive and significant impact of foreign debt servicing on GDP in the short run. This would imply that foreign debt servicing may be linked to productive external borrowings that supports economic activities.

The error correction term (ECM(-1)) has a coefficient value of 0.976735, and it is statistically significant which mean a very high speed of adjustment towards long-run equilibrium. This means that roughly 97.7% of short run deviations from long run equilibrium are corrected in one period. The R squared value 0.979675 can be interpreted as approximately 97.97% in GDP being explained due to change in domestic and foreign debt servicing. The significant F-statistic (546.2823) provides more confirmation on the overall fitness of the model while the Durbin-Watson statistic of 1.687886 indicates that there is no serious autocorrelation in the model. Overall, the results point out that the debt servicing plays a major role in affecting the economic growth of Nigeria.

Discussion of Findings

The empirical result of the parsimonious error correction model show that there is a negative and statistically significant relationship between domestic debt servicing (DDS) and gross domestic product (GDP) in Nigeria. This has the implication that when domestic debt repayment obligations increase, this affects economic growth downwards. The result implies that a high percentage of government revenue used to pay its domestic debt may mean less money going into productive investment in critical areas such as infrastructure and education/healthcare, etc. As a result excessive domestic debt service may crowd out growth-enhancing public expenditure and slow economic growth. This result is in line with the Debt Overhang Theory, which is the idea that when a country takes on too many debt obligations, the anticipated future repayment burden of debt will discourage investment and retard economic growth (Krugman, 1988; Sachs, 1989). The result is also consistent with several empirical researches in Nigeria. For example, Ehikioya and Omankhanlen (2021) reported that the domestic debt has a negative impact on economic growth when the debt burden becomes too much. Similarly, Kolawole et al. (2024) also found that domestic debt servicing has negative long-run effect on economic performance as

government resources are drained from productive sectors to debt servicing. Ndu (2024) also noticed that rising debt servicing payments is a major constraint to economic growth in Nigeria. From the point of view of the Solow Growth Theory, excessive debt servicing on domestic loans discourages capital accumulation through curtailing government investments in productive infrastructure and other areas of growth (Solow, 1956). Thus, the negative relationship across domestic debt servicing and GDP implies the possible negative impacts of rising domestic debt servicing on the growth of Nigeria's economy.

The empirical results further suggest that there is a positive and a statistically significant relationship between foreign debt servicing (FDS) and the GDP in Nigeria. This suggests the increases in foreign debt servicing are related to improvements in economic growth. The positive relationship implies that foreign borrowing may have been harnessed towards financing productive investments that stimulate economic activities and, therefore, support growth in spite of repayment obligations. When external loans have been invested in the infrastructure development, industrial expansion and technological advancement, it can increase productivity and raise the national output. This result is consistent with the Keynesian theory of public debt who noted that government borrowing has the potential of stimulating economic activity through increased public expenditure and investment (Keynes, 1936). There is also empirical evidence that confirms this finding. Opara, Nzotta and Kanu (2021) reported that external borrowing could positively add to economic development if properly handled and invested in productive sectors. Similarly, Yusuf and Mohd (2023) found that external debt under some macroeconomic circumstances can be good for economic growth despite the possibility of many debt service payments reaching a level of burden in the longer run. Olusegun, Oladipo, and Omotayo (2021), also reported that debt servicing can positively impact the growth of the economy provided that it is supported by effective public financial management. From the point of view of Solow Growth Theory the foreign borrowing can increase Capital accumulation and technological development by increasing the productive capacity of economy (Solow, 1956). Therefore, from the positive relationship between foreign debt servicing and GDP, it suggests that the external borrowing may have supported the economic growth of Nigeria during the study period.

Conclusion and Recommendation

Conclusion

This researic debt servicing (DDS) and foreign debt servicing (FDS) as explanatory variables and the groch work investigated the effect of debt servicing on economic growth in Nigeria using the domestss domestic product (GDP) as the measure of economic growth. The findings showed that the domestic debt servicing has a negative and significant impact on GDP, meaning that a rise in domestic debt repayment obligations is limiting economic growth by diverting public resources from productive investments. Conversely, foreign debt servicing was observed to have a positive and significant relationship with GDP indicating that perhaps external borrowing helps foster economic expansion if properly utilized. Overall, the study concludes that while debt can spur the growth of the economy, excessive domestic debt servicing may impede the economic performance of Nigeria. Therefore, responsible debt management and managing fiscal use of borrowed funds are necessary to achieve stable economic growth.

Limitations of the Study

This study is limited by its use of secondary time series data, which may be prone to measurement errors and data inconsistencies from official data sources. The study also focused on only domestic debt servicing and foreign debt servicing, but had not taken into account other macroeconomic variables such as inflation, interest rate and exchange rate that may contribute to the economic growth. Furthermore, the research was confined to Nigeria and the period of 1986-2024, which could negatively impact the generality of the result to other economies or timeframe. Despite these limitations, the study gives the book empirical valuable insights in the relationship between debt servicing and economic growth in Nigeria.

Recommendations

First, the Nigerian government should minimise excessive dependence on domestic borrowing, and embark on prudent debt management strategies regarding the domestic debt. Since domestic debt servicing has a negative impact on economic growth, policymakers should ensure that that domestic borrowing is kept within sustainable limits. Government should also work on re-structuring of existing domestic debt instruments by increasing maturity periods and lowerings interest obligations.

Second, government should ensure that loans borrowed from abroad are strictly channelled towards productive sectors of the economy and specifically to infrastructure development, energy supply, manufacturing and technological innovation. Productive use of foreign borrowing will increase the ability of the economy to create higher levels of output and export income to meet future repayment obligations.

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